

DENTAL DISEASE PLAGUE OF MODERN SOCIETY

The epidemic of dental disease in the industrialised world is a consequence of poor nutrition from eating foods grown in depleted soils and denatured by commercial food processing.

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The Problem

Dental cavities are a huge problem in the United States and many other industrialised countries around the globe. This is not a new problem, as it has been with us for as long as there has been industrialisation. Dental caries, tooth loss, gum disease and other such oral health concerns are widespread and ubiquitous worldwide.

For the past 150 years, the dental profession has been filling our mouths with mercury in order to deal with the consequences of tooth decay. The government has claimed victory over dental deterioration by these measures, citing the fact that "[t]he baby boomer generation will be the first where the majority will maintain their natural teeth over their entire lifetime, having benefited from water fluoridation and fluoride toothpastes".¹ But let's take a closer look at the numbers. They want us very badly to believe that things are getting better, that their strategy has worked and that we really are doing well on mercury fillings and water fluoridation. However, the statistics are sobering.

Today there are some 100,000 dentists installing over 100 million mercury fillings per year in the United States alone.² An estimated 140 million Americans have at least one mercury filling,³ while 25 per cent of the entire population has at least one untreated cavity⁴ (and who can blame them for forestalling treatment). An astounding 20 per cent of all adults between the ages of 55 and 64 will have lost all of their teeth! One younger adult out of 250 will also share this fate.⁵ In-born deformities of the jaw and dental arch, impacted wisdom teeth, the need for braces and orthodontic therapies, crooked teeth, gum disease, pyorrhoea, gingivitis, oral cancers and root canals are widespread and common to the extent that they touch almost everyone in some way. We have come to accept dental disease as inevitable and commonplace. It seems that the United States is a country founded on the notion of tooth loss as a patriotic endeavour, what with the well-known childhood stories of the father of our country, George Washington, having had wooden dentures!

In relation to all of the other health concerns our nation is experiencing, this one seems only minor in comparison. Governmental authorities would just as soon sweep it under the carpet. Anyone who has ever suffered from the pain of a decayed tooth knows the true cost in agony of this illness. Some would claim that dental caries are just the tip of the iceberg and that they are a small symptom of a much larger problem which only becomes more and more buried the more we try to treat it with the current approach. Our dental system has two simple solutions to cavities: fill the tooth or pull the tooth. When there are no more teeth, it seems the problem is permanently solved. But for those who must go through life with no teeth, the problems only multiply. Aside from the altered appearance that they cause, those dentures can be uncomfortable and they don't seem to do a very good job in chewing food. Consequently, malnutrition in the elderly population is very common, and it is not unthinkable that the complete loss of teeth encourages this condition.

The American Dental Association (ADA) and other agencies attempt to treat dental decay as a "local" issue.⁶ We have been fed such propaganda for generations. Their central dogma is that tooth decay results from an overgrowth of bacteria in the mouth.⁷ The bacteria are fed by sweets, sugar and starchy foods. These organisms, they say, produce acids which corrode the dental enamel and lead to cavities. They say that the bacterial growth in the mouth causes other problems, too, such as plaque build-up, tartar deposits and gum disease. Therefore, their position in treating this problem is to advocate

tooth-brushing several times per day, and other such measures. They recommend flossing, mouthwashing and regular dental cleanings, along with anything else that has the effect of reducing mouth bacteria and bolstering the enamel. They even go so far as to apply sealant to the teeth in order to protect them from this vile acid.

In regard to therapeutic diet and nutrition, they believe that the intake of sweets and sugary foods feeds the bacteria and thereby increases the severity of the problem.⁸ They believe that by exposing the teeth to fluoride, this will increase the strength of the enamel and improve resistance to acid-producing bacteria.⁹ An interesting conclusion that one could infer from these beliefs is that you could eat all the sugar you desired without the corrosion of the teeth if you just brushed and flossed afterwards so as to reduce the bacterial ecosystem. What did people do to prevent tooth decay before there was toothpaste, toothbrushes and dentists?

They further attempt to treat those who apparently are not brushing thoroughly enough by filling cavities with mercury and exposing the population to water fluoridation—actions that have many far-reaching implications in themselves. Nearly everyone in the US has been affected by dental decay, and we are told that this is a superficial problem involving only bacteria in the mouth working against the thin layer of enamel that protects our teeth. Only the veneer of their story relative to the truth is thinner than that enamel! What if the problem is much deeper and is a direct result of the Western way of life? What if the problem of tooth decay is inherent in the ways we have chosen to feed ourselves and the way we take care of the Earth?

We have become so transfixed dealing with the sequelae of mercury fillings and fluoridated water that we've lost sight of the original, underlying problem: tooth decay that has resulted from consuming over-processed and depleted foods.

We seem to have forgotten that our ancestors, before industrialisation, kept all of their teeth in great condition their whole lives without dentists, toothpaste, toothbrushes, mercury fillings or fluoride in their water! When we look at the old pictures of the Native Americans before they started eating the white man's food, we see that they had excellent dental health. When the archaeologists examine the skulls of these ancient people's ancestors, they find the teeth are in perfect condition. Generation after generation, for thousands of years, there were no problems. It is only in our own modern era that dental decay has become such a huge concern.

One of the many great differences between "primitive" cultures and our modern society is the list of items that we consider food. Food for our remote ancestors came directly from the Earth, whereas food in an industrial society is factory produced. Modern farming methods along with common food processing practices strip our diets of most all essential nutrients. Herein lies the true cause of tooth decay. Our modern way of life seems to necessitate the mass production of foodstuffs; however, the efficiency of our current system is based on the profit margin of the corporate food industry. The health of the planet and all of its inhabitants is not the driving force—nor even one of the greater

considerations—of the agriculture business. Consider the widespread use of deadly pesticides, synthetic fertilisers and genetically modified organisms. Who benefits the most from the use of these methods? Who must suffer the consequences of the long-term side effects of these poisons?

True Causes

It seems that an inordinate amount of effort is put into giving people the *appearance* of a healthy smile, without anything actually being done to promote the reality of such an event. Teeth whiteners, whitening toothpastes and cosmetic dentistry presented to the public by the ADA give us the subtle feeling that this organisation is doing all it can to make us look and feel our best. Yet this veil of deception is only a thin curtain which hides one of the great atrocities of our time. If we get down to the root of this problem, we see that it extends down deep into the Earth, into

the soil—and we see how we have been selfishly depleting the richness of the soil for hundreds of years without a thought of replacing it for future generations.

Tooth decay is really an environmental problem: one that winds its way through the ecosystem, inclusive of all life-forms from microbes to mammals. It is not difficult to connect the health of the soil with the health of those people eating food from the soil. A rich diversity of microscopic life, insects and other subterranean creatures inhabit and interact with the top layer of soil. In the process of their living and dying, the dirt is transformed into a reservoir of nitrogen, abundant minerals and other biological building blocks. Plants absorb these compounds, and farm animals eat the plants. Humans then go on to eat both the plants and animals.

When people have access to foods that have been produced from healthy soils containing proper amounts of phosphorus, calcium and all trace minerals, then they receive these nutrients directly from eating the food. Such is not the case in our modern societies.

Factory farming techniques have left the soil sterile and depleted. Synthetic petroleum-based fertilisers and pesticides do not begin to replace the vast, intricate ecosystems that they supplant. Our method of agriculture is chemically based, and it neglects to take into account the health of the very soil on which it depends. The current technology leads to over-farming of the land and depletion of the soil. Hardly any attempt is made at all to replace the minerals lost to the harvested crops. The factory processes which most farmed foodstuffs go through after harvest only add insult to injury, all but stripping the meagre nutritional value from these tortured products.

A stroll through any supermarket will reveal the underlying causes of our dental woes. Every item on the shelf, it seems, has been altered from its natural form. All of the foods seem to have added sugars, added sweeteners, refined grains and refined vegetable oils. Canned, packaged and preserved foods are the norm and it is difficult if not impossible to find much other than these at most major food outlets. Even the "fresh food" aisles seem no less contaminated. Some fruits and vegetables have been genetically modified and just about everything has been sprayed repeatedly with poisonous chemicals, pesticides and synthetic

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fertilisers. Meats and fish have come courtesy of "factory farming" techniques and are laden with drugs, hormones and antibiotics to compensate for the miserable health of the caged animals. Milk products come from cows eating industrial waste; the milk must be pasteurised in order not to make people ill.

In contrast to industrialised societies with our modern methods, indigenous populations are cognisant of the need to protect the richness of the topsoil so that it can provide healthy foods for them and for people in the future. Using time-tested methods passed down from generation to generation for thousands of years, these people have kept themselves and their children healthy. The "primitive" cultures of the world have seemingly solved their food production problems. They make every effort to prevent erosion and soil loss as they fertilise the land through non-synthetic methods. Diversity of crops, crop rotation, resting the soil and the liberal use of organic fertilisers all help to ensure soil fertility. These observations and many others were first recorded by nutritional pioneer Dr Weston A. Price, a dentist who was curious about the underlying causes of tooth decay.

Seventy years ago, Dr Price began a systematic study of the growing dental caries problem in that era by visiting indigenous populations around the world and analysing their teeth in relation to their diets.¹⁰ Generally speaking, he found that when native peoples around the globe continued eating the diet that their ancestors for many generations had eaten, they could easily maintain exceptional dental health, in the order of near perfection. However, when they started eating the Western processed foods that were just becoming available to them from contact with the white race, they started to have dental cavities with much frequency. The figures stated at the beginning of this article are reminiscent of the observations made by Dr Price of those eating a poor diet. When indigenous societies adopted a modern diet, their dental health rapidly deteriorated; whereas those who maintained a traditional diet, consisting of foods that their ancestors ate, kept their beautiful teeth into old age.

It is interesting to note that although the indigenous peoples did not brush their teeth much (and as a consequence had all sorts of accumulated food matter), they still did not have any cavities.¹¹ They were able to keep near-perfect dental health for their whole lives, as long as they were eating their traditional diets. The individuals examined had excellent teeth, even though they did not have fluoridated water, dentists or toothpaste. As soon as they starting eating the highly processed "white man's food", they began losing their teeth to decay. In these cases, brushing made their teeth cleaner, but they still got cavities! This observation alone should call into question the false beliefs that the ADA has instilled in the American people.

The foods that specifically caused dental ill health were the following: white flour, sugar, polished rice, canned food, refined vegetable oils and all the food products that contain these ingredients. Sure enough, these kinds of food items are just about all that can be found in the typical Western supermarket. When grains are processed and ground into flour, particularly white flour, they are

stripped of much of their nutritional value. The same can be said for white rice, white sugar and any other highly refined food item. The end result of most food processing is a substance high in "empty calories" and devoid of vitamins, minerals, proteins, live enzymes and fats. When a food requires the body to expend more resources than it actually gives, the food can be termed an "anti-nutrient". These types of foods are a net loss for the body, since they deplete the body of more nutrients during the process of being digested than they could ever provide.

In addition to discovering this most obvious correlation between diet and dental caries, Dr Price also found that dental health was an indication of overall fitness. He observed a startling connection between a processed food diet and birth defects of the mouth and jaw. Those eating processed food were much more likely to produce children with malformed dental arches. This was a new development in these cultures. The parents in these cases had perfectly formed jaws, so it seems that their children's deformities were not the result of heredity. Examination of the ancestral remains again revealed perfectly formed dental arches. It was only after eating modern processed foods that these kinds of problems began to appear. In our modern society, these types of birth defects are commonplace. It is no coincidence that in the 70 years since Dr Price made his observations, the condition of our food supply has become much worse.

Our current approach to food production is damaging to our teeth, to our general health and to the health of the environment. The introduction of a vast array of artificial foods never before seen in the human diet has had a tremendous impact on all our lives. Dental decay is but one minor side-effect of our actions, but it is one that can no longer be denied. By understanding the true causes of dental caries, we can begin to accept the reality of our predicament and, with any hope, begin to change it.

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"Me? I'm a vaccine researcher."

Holistic Dental Hygiene

It seems that the ADA has never considered the possibility that the teeth and mouth are connected to the rest of the body and do not operate in isolation. The idea that cavities are the result of systemic disease is not a new one. Other medical systems, such as oriental medicine, consider oral disease to be a manifestation of systemic imbalances and nutritional deficiencies. Although the role of bacterial infection in diseases of the oral cavity cannot be entirely dismissed, it must be remembered that the functioning of the rest of the body is what allows or disallows a susceptibility to these germs. When all of the body systems are working properly and efficiently, it is far more difficult for the pathogenic organisms to make a stronghold. Bacteria can only grow if the micro-environment is suited to their liking.

Thousands of years ago, oriental medicine practitioners knew that the health of the teeth and gums was a reflection of the health of the entire body.¹² Traditional Chinese medicine has long made use of this holographic concept, wherein examination of one particular body part can reveal hidden clues about the health of the entire system. This is a hallmark of oriental medical diagnosis, and it has been a precise and accurate art form for a very long time. Whether it is the pulse, the tongue, the face, the ear or the hand that is being examined, it doesn't seem to matter. A body part with as much significance and interconnectedness as the mouth surely has great potential as a diagnostic tool in itself. Anyone who has ever "looked a gift horse in the mouth" can tell you that observing the teeth is a quick and convenient method for assessing the soundness of the entire organism.

In oriental medical philosophy, the teeth are not seen as separate from the rest of the body. On the contrary, the teeth are understood as an outcropping of other body systems.¹³ They are bones, and as such they represent the general health of the bones and skeletal system. Teeth appear to grow right out of the jawbone, and they are composed of the very substances from which bones are derived. It has been demonstrated many times in China that when the bones are healthy, the teeth will be healthy. Conversely, when the bones are diseased, the teeth will have a tendency towards the same type of degeneration. Even in Western science, we know that the teeth are composed of calcium, minerals, proteins and other related compounds. Since the body cannot make these nutrients, the teeth will suffer if the necessary building materials are absent from the diet.

Another observation from Chinese medicine is that the mouth is the very beginning of the stomach and digestive system.¹⁴ If there is illness or dysfunction in the digestion, then this can sometimes show up as dysfunction in the teeth and lining of the mouth. Indeed, this can be understood if we recognise the fact that calcium and other minerals must be absorbed into the bloodstream through the intestinal lining before they can actually be used by the body. It is not enough that the nutrients are in the food we eat: they must be taken up during the process of digestion if they are to be useful. This is an inefficient process in the best of cases, and with the presence of disease in the digestive tract it only becomes more so.

From a Chinese medicine standpoint, the mouth is a component of the respiratory system, since it is the opening of the airway and contiguous with the linings of the bronchi and lungs. An imbalance in the lungs could easily manifest as pain and degeneration of the teeth. In the same fashion, a relationship can be drawn between the teeth and all other body systems. The teeth are connected very directly to the heart through the blood vessels. We know this even in Western medicine, which is why some people must take antibiotics before having dental work in order to avoid spreading infectious organisms to the heart and other organs. So healthy blood and strong circulation are necessary for dental health, too. While it is likely that oral hygiene plays a role in dental caries, it must be understood that oral disease is often an indication of an imbalance present somewhere else in the body.

The quality or composition of the saliva has a great influence on dental health. Having saliva that is at the proper pH and rich in minerals, vitamins, enzymes and other protective factors which favour the remineralisation of the enamel and discourage the proliferation of pathogenic organisms would go a long way towards preventing caries. While observations, both casual and scientific, attest to the positive correlation between oral hygiene and healthy teeth, it is the means of obtaining this hygiene that appears to be the issue. Quality of saliva is the key! If one is able to increase the mineral, live enzyme and vitamin content of the saliva, then it is possible to emphasise the "building" effects of the saliva and minimise the growth of destructive elements. This can only be accomplished

through a healthy diet. There are three major classes of compounds that were abundant in the diets of our ancestors but are typically absent from our modern diet.¹⁵ These are fat-soluble vitamins, minerals and enzymes.

• Fat-Soluble Vitamins

The most essential components that are missing from our modern diets are the fat-soluble vitamins; namely, vitamins A and D. Vitamin A is responsible for many of the biological processes that occur at the cellular level.

Lack of this vitamin has been implicated in birth defects, poor vision, decreased immunity and many other conditions. Vitamin D is essential for the uptake and utilisation of minerals in the digestive tract and in the bloodstream. Its presence and abundance determine how well calcium and other minerals such as magnesium can be absorbed from food and deposited into the teeth and bones. These two vitamins are rare in that they are typically found in only a few types of foods. Raw dairy products, eggs from free-range chickens, liver and some fish products such as cod liver oil are the only places where these nutrients can be found in appreciable quantities.

Vitamin A is essential for many body processes and is an indispensable requirement for good dental health. This compound is a co-factor in many enzymatic reactions and cellular processes. It is an excellent antioxidant and is necessary for tissue growth and repair. The immune system is dependent upon an adequate supply of this vitamin. Healthy bones and teeth are not possible without sufficient vitamin A. Dr Price, in his travels to visit the people of indigenous cultures, found that on average these robust

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individuals consumed more than 10 times the amount of vitamin A than is found in the typical modern diet. The excess, he hypothesised, was an extra measure against the possibility of deficiency. The need for vitamin A increases during times of stress, with exposure to environmental toxins and with the presence of any chronic or acute disease.

Vitamin D is another fat-soluble vitamin that is indispensable for healthy teeth and bones. While it is true that the body can make small amounts of this vitamin from exposure to sunlight, an adequate dietary supply is also required. Many health authorities agree that the US Recommended Daily Allowance of vitamin D needs to be increased. Vitamin D is necessary for the absorption of calcium from food in the digestive tract. It is also required for the process in which the calcium is deposited into the bony structures and teeth. A severe vitamin D deficiency leads to rickets in children and osteomalacia in adults—conditions in which the bones begin to soften. It is no secret that vitamin D deficiency is common and widespread.¹⁶ In a modern dietary research study, it was found that Norwegians consume 50 times the amount of vitamin D as Americans in order to keep themselves healthy.¹⁷

The Western diet tends to be low in fat-soluble vitamins for at least two reasons. First, vitamins such as A and D are mostly destroyed or removed during "normal" food processing. For example, raw cow's milk and cream are typically excellent sources of vitamins A and D. However, during the process of pasteurisation, in which the milk is heated to very high temperatures, these nutrients are lost. In an attempt to replace the lost nutrients, milk companies add synthetic vitamins to their products.

Yet, much evidence suggests that these artificially derived compounds are not as well utilised by the body as their natural counterparts.

Another reason why our foods are deficient in the fat-soluble vitamins is that they have been purposefully removed along with the fat. We've been told by the health authorities—including the American Heart Association, the American Dietetic Association and our own family doctors—as well as the media that animal fat is not good for us, that it is the greatest causative factor in many chronic degenerative diseases. We have been lulled into forgetting that the fat-soluble vitamins on which our health depends are only found in the fatty parts of the animal foods. As the fat is removed from milk to make skim milk, all of the fat-soluble vitamins are also removed in the process. When the fat is cut away from a steak or the skin on a piece of roasted chicken is discarded, the fat-soluble vitamins are being thrown out as well. The fashionable practice of eating a reduced-fat diet has had the concomitant effect of reducing our intake of all of the fat-soluble vitamins as well. This practice is to our detriment.

• Minerals

Mineral content is a separate but related issue. Modern diets contain only a small fraction of the minerals that were present in the diets of our ancestors. Primitive diets contained from six to 25 times the content, depending on the particular mineral under question.¹⁸ Modern food processing techniques strip the food of its mineral content and leave it depleted. Any inefficiency in digesting and assimilating these nutrients further compounds the problem by making it difficult to absorb the scant minerals which

are present. Minerals are expended rapidly by the body as a result of normal metabolism, but the need is increased during times of stress. Other factors that increase the need for minerals include consumption of coffee and caffeinated beverages, exposure to pollution and use of drugs. As a result, many individuals are deficient in one or more essential minerals.

Bones and teeth contain varying amounts of all the minerals, not just fluoride. Though fluoride's role in cavity prevention has been elevated beyond the status of other nutrients, it is certainly not the only requirement for healthy teeth. Adequate calcium, magnesium and trace minerals such as zinc, vanadium and boron are necessary for building teeth. These elements are hard to find in the modern diet under any circumstances because of our depleted soils.

Minerals come from the earth—from the soil, and from rocks that have been eroding for thousands of years. Under the best conditions, plants absorb the minerals and make them more easily available to the mammalian digestive system. These compounds eventually become part of the food chain and enter our human diets. The more minerals that are present in the soil, the more that

end up in the foods we eat. But when the soil becomes depleted through overuse and improper care, the minerals never make it into the plants in adequate quantities. As if this were not damaging enough, the mineral content of foods is further depleted through processing and refining.

The kinds of foods we eat determine our mineral intake. Ancient cultures around the world, for example, included mineral-rich bone broths in their diets. Yet these nourishing foods have been replaced in our modern society

by heavily processed canned and packaged soup mixes which have hardly any minerals at all! An easily available and inexpensive solution to improve dietary mineral content is to include "bone broth" in the diet every day.¹⁹ This tasty, mineral-rich meal is prepared by boiling bones (raw or cooked) in water with a little vinegar for 24–48 hours, skimming off the surface residue every so often (see endnote 19 for recipe source; also see the website <http://www.westonaprice.com>). The resulting broth should be drunk in small quantities throughout the day; excess broth can be frozen in separate containers and then thawed and reheated each day. A dose of one or two cups per day would be sufficient for improving health. Other excellent sources of minerals include sea vegetables, unrefined sea salt, organically and/or biodynamically produced fruits and vegetables, and raw cow's milk.

• Enzymes

The third major component of natural foods that was abundant in the diets of native peoples around the world but nearly absent from most American diets is enzymes. Enzymes are the compounds which catalyse most of the billions of chemical reactions that occur in the body each day. These macromolecules are discrete protein elements, each with a specific structure and dedicated function. For example, the enzyme amylase breaks down carbohydrates into sugar molecules, protease breaks down protein from foods in the digestive tract into amino acids, and lipase breaks down dietary fat into glycerides.

Enzymes, though varied, all share one weakness in common: heat. Enzymes are destroyed in cooking and at temperatures used in food processing. Heat denatures an enzyme so that its structure

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changes. As a result, the enzyme is no longer able to function. Typically, most of the enzymes in processed foods and cooked foods are completely destroyed, so the typical American diet is thoroughly lacking in these important compounds. This is in stark contrast to the diet of indigenous people who purposefully eat raw and fermented foods regularly to obtain a source of live enzymes.

Live enzymes in the food supply accomplish several important goals. First, as the enzymes are released and activated in the stomach, they help to autodigest the food itself. This makes it easier for the body to process and absorb the foodstuff in its entirety. Second, when they are present in food, live enzymes also help to conserve the body's own precious enzyme reserves.

Research on the importance of dietary enzymes has been conducted by Dr Edward Howell and Dr Francis Pottenger, two nutritional doctors who have worked extensively in this branch of food science. Dr Howell proposed that each person has a very limited supply of digestive enzymes produced and stored in the pancreas.²⁰ When these enzymes are depleted, death follows not long afterwards. Raw foods provide their own enzymes, and the body responds by using fewer of its own pancreatic enzymes to digest the food. Good sources of enzymes are all the raw foods. For example, raw, unrefined, extra virgin olive oil is an excellent source of enzymes—as opposed to any bottle of "salad dressing" that you may find on the grocery store shelf, which has practically no enzymes. Raw salads, raw eggs, raw milk, papaya and pineapples are also full of enzymes. Fermented foods such as yoghurt, homemade sauerkraut, kimchi and pickles are rich in enzymes.

In a famous set of experiments, Dr Francis M. Pottenger, Jr used two sets of cats to demonstrate the importance of raw foods in the diets of mammals.²¹ Both sets of cats were fed a base diet of raw milk and cod liver oil. The first group additionally received raw meats; the second group received only cooked meats in addition to this base diet. The impact of these two different diets was observed through the offspring of these two groups of test animals. The kittens born from the raw food group were quite healthy and normal, whereas the kittens born from the cooked food groups did not fare so well. These kittens were born with many deformities of the teeth and jaw; they tended to be smaller, and fewer of the litter survived the birth process. In Dr Pottenger's experiments, the second generation of cats was allowed to reproduce. The cats produced from the original raw

food group were fed raw food, and the kittens from the original cooked food group received cooked food. In the third generation of cats, the kittens produced from the cats who received raw food were all healthy and well behaved. The next generation of the cooked foods group became progressively more diseased to the point where they were no longer capable of reproducing. The cooked food group went extinct while the raw food group thrived.

The Solution

It is time for us to reclaim our health and dietary heritage. If we wish to keep our teeth healthy into old age the way our ancestors did, we must eat as they did. The only solution to tooth decay is a return to the farm. Dental caries can be prevented through improved nutrition from top-quality food sources such as raw milk products, grass-fed meats, organic eggs and fresh, organically/biodynamically grown fruit and vegetables. Supplements such as cod liver oil, multivitamins, minerals and trace minerals will go far in bolstering this sort of improved diet.

Dr Price had excellent results from supplementing diets with cod liver oil and "high-vitamin butter", an extract of butter produced from dairy cows that were eating rapidly growing grass. This type of butter you can't find at the supermarket. Industrial farming does not allow the masses access to these vital factors, nor does it feed the dairy cows green grass, their preferred food.

Avoidance of all processed foods, junk foods and refined oils is also necessary to improve dental health. In order to take control of our own well-being, we must take back control of our food supply. This can be a very easy thing, since we all eat food several times per day. Rejecting convenient junk foods and replacing them with real foods will help to change our current paradigm. Quality food choices are the key. Consuming raw milk from free-range, organic, pasture-fed cows is one way that our ancestors gained immunity from dental disease. As soon as we start processing foods, all benefits are seemingly lost.

It seems that the agricultural corporations, which dictate exactly what we eat, do so for the purpose of making a profit, with little or no regard for the health consequences to the populace. We must reconsider our whole farming strategy and solicit only those farms that are willing to take special care to put something good back into the soil so that future generations might be able to grow food, too.

Endnotes

1. See "Fact Sheet: Oral Health for Adults", 2001, at <http://www.cdc.gov/oralhealth/factsheets/adult.htm>.
2. See Dr Ziff's *Dentistry Without Mercury*, Bio-Probe, Florida, USA, 1993.
3. *ibid.*
4. See National Center for Health Statistics, "Health, United States, 2004", Table 80, at <http://www.cdc.gov/nchs/hs.htm>.
5. "Fact Sheet: Oral Health...", *op. cit.*
6. See J.D. Featherstone, "The Caries Balance", in *Oral Health Prev. Dent.* 2004, Suppl 1:259-264.
7. *ibid.*
8. *ibid.*
9. *ibid.*
10. See Weston A. Price, DDS, *Nutrition and Physical Degeneration*, Price-Pottenger Nutrition Foundation, CA, USA,

- 2004 (first published in 1939).
11. *ibid.*
12. See any good Chinese Medicine textbook, such as *Chinese Herbal Medicine: Formulas & Strategies*, compiled and trans. by Dan Bensky and Randall Barolet, Eastland Press, Seattle, USA, 1990.
13. *ibid.*, p. 263.
14. *ibid.*, p. 93.
15. Price, *ibid.*
16. See M.F. Holick, "Sunlight and vitamin D for bone health", in *American Jour. Clin. Nutr.* 80(6Suppl):1678S-88S, Dec 2004.
17. See M. Brustad et al., "Vitamin D status in a rural population in northern Norway", in *Public Health Nutr.* 7(6): 783-9, Sept 2004.
18. Price, *ibid.*
19. See Sally Fallon with Mary Enig, *Nourishing Traditions*, NewTrends Publishing, Washington, DC, USA, 1999.

20. See Dr Edward Howell, *Enzyme Nutrition*, Avery Publishing, 1985, and *Food Enzymes for Health and Longevity*, Lotus Press, 1994 (enlarged/rev 2nd ed.).
21. See Francis M. Pottenger, Jr, MD, *Pottenger's Cats*, Price-Pottenger Nutrition Foundation, CA, USA, 1995.

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